

WHAT IS CLAIMED IS:

1 1. A system for recording media content and for generating media
2 representations, the system comprising:
3 an extraction module for extracting of media content from a media receiver;
4 an output device for generating a media representation of media content extracted
5 from the media receiver, the output device being coupled to the extraction
6 module; and
7 a media transfer interface for permitting communication between the output
8 device and the media receiver, the media transfer interface being coupled
9 to the media receiver.

1 2. The system of claim 1, further comprising media content recognition software
2 for recognizing features in media content.

1 3. The system of claim 2, wherein the media content recognition software further
2 comprises speech recognition software.

1 4. The system of claim 2, wherein the media content recognition software further
2 comprises optical character recognition software.

1 5. The system of claim 2, wherein the media content recognition software further
2 comprises face detection software.

1 6. The system of claim 2, wherein the media content recognition software further
2 comprises speaker detection software.

1 7. The system of claim 2, wherein the media content recognition software further
2 comprises keyframe selection software.

1 8. The system of claim 2, wherein the media content recognition software further
2 comprises face recognition software.

1 9. The system of claim 1, further comprising processing logic for controlling
2 display of a user interface, wherein the user interface permits the user to control actions
3 of the output device.

1 10. The system of claim 1, further comprising processing logic for controlling the
2 generation of a media representation.

1 11. The system of claim 1, further comprising a storage medium for storing
2 media representations in electronic format.

1 12. The system of claim 1, wherein the media representation generated by the
2 output device is stored on a digital storage medium.

1 13. The system of claim 1, further comprising one or more user interaction
2 devices that permit the user to interact with the printer and control the printer's actions,
3 wherein the user interaction devices are external to the printer.

1 14. The system of claim 1, wherein the media representation is generated in paper
2 format that includes at least one user-selectable identifier allowing a user to access and
3 control media content.

1 15. The system of claim 14, wherein the at least one user-selectable identifier
2 comprises at least one barcode printed on the media representation.

1 16. The system of claim 15, wherein the at least one barcode further comprises at
2 least one record barcode that can be scanned to record an associated media program.

1 17. The system of claim 15, wherein the at least one barcode further comprises at
2 least play barcode that can be scanned to play an associated media program.

1 18. The system of claim 14, wherein the at least one user-selectable identifier
2 comprises at least one numerical identifier which the user can type into an external device
3 to access and control media content.

1 19. The system of claim 1, wherein the media representation is a document
2 displaying scheduling information for media programs.

1 20. A method for recording media content and for generating media
2 representations, the method comprising:
3 extracting media content from a media receiver;
4 generating a media representation of the media content; and
5 communicating with a media receiver through a media transfer interface, wherein
6 an output device communicates with the media receiver.

1 21. The method of claim 20, further comprising the output device using media
2 content recognition techniques to recognize media content extracted from the media
3 receiver.

1 22. The method of claim 20, further comprising the output device sending
2 commands to the media receiver to control actions of the media receiver.

1 23. The method of claim 20, further comprising scheduling actions of the media
2 receiver to occur at predefined times.

1 24. The method of claim 23, wherein scheduling actions further comprises
2 scheduling generation of a media representation, wherein the generation is scheduled to
3 occur at user-defined time periods.

1 25. The method of claim 24, wherein scheduling generation of a media
2 representation further comprises entering scheduling preferences into a profile that
3 controls actions of the output device which controls actions of the media receiver.

1 26. The method of claim 20, wherein generating a media representation further
2 comprises generating a schedule representation of a list of media programs, wherein the
3 schedule representation includes specific information about each media program.

1 27. The method of claim 26, wherein generating a schedule representation of a
2 list of media programs further comprises formatting the schedule representation based on
3 a pre-defined user preferences profile.

1 28. The method of claim 26, wherein generating a schedule representation of a
2 list of media programs further comprises updating the generated schedule representation
3 to include current schedule information.

1 29. The method of claim 26, wherein generating a schedule representation of a
2 list of media programs further comprises:
3 setting a media display to a channel that includes a schedule display showing
4 media program scheduling information; and

5 performing optical character recognition on the schedule display of the media
6 display to read schedule information content and generate a representation
7 of the schedule display.

1 30. The method of claim 26, wherein generating a schedule representation of a
2 list of media programs further comprises searching for specific user-defined features
3 within the media content and displaying search results.

1 31. The method of claim 20, further comprising monitoring commands from an
2 external interface, wherein the commands include a request to generate a media program
3 schedule representation with user-defined parameters.

1 32. The method of claim 20, further comprising monitoring commands from an
2 external device, wherein the commands include a request to update an internal table that
3 stores the association between user-selectable identifiers printed on the media
4 representation and the actions that can be executed on the output device in response to
5 those user-selectable identifiers.

1 33. The method of claim 20, further comprising recording media content and
2 storing the media content on a storage medium, wherein the stored media content can be
3 played in response to commands received from an external device interface.

1 34. The method of claim 20, further comprising a web server with a common
2 gateway interface for controlling the schedule for recording and playing of media
3 content.

1 35. The method of claim 20 wherein generating a media representation further
2 comprises printing media schedule information in a paper-based format.

1 36. The method of claim 35, further comprising selecting a user-selectable
2 identifier on the paper-based format of the media schedule information to record the
3 associated media program.

1 37. The method of claim 35, further comprising selecting a user-selectable
2 identifier on the paper-based format of the media schedule information to play the
3 associated media program.

1 38. The method of claim 26, further comprising updating a database that stores
2 current schedule information and associated user-selectable identifier information.

1 39. The method of claim 26, further comprising advancing a schedule display,
2 wherein advancing the schedule display comprises:
3 capturing a first frame of the current schedule display on a schedule channel;
4 sending a command to the media receiver to advance the schedule display on the
5 schedule channel;

- 6 capturing a second frame of the advanced schedule display on the schedule
- 7 channel; and
- 8 comparing the first frame to the second frame to determine if the schedule has
- 9 changed and the schedule display should be advanced .